Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Allocation of Spectrum Below	)	ET Docket No. 94-32
5 GHz Transferred from	)	
Federal Government Use	)	

U S WEST COMMENTS

U S WEST Communications submits these comments in response to the Notice of Proposed Rulemaking, FCC 94-272 (Nov. 8, 1994). These comments address only two of the radio bands discussed in the Notice: the 2300-2310 and 2390-2400 MHz bands.

I. The 2300-2310 and 2390-2400 MHz Bands Should Be Paired

The Commission asks whether the 2300-2310 MHz band should be paired with the 2390-2400 MHz band.[1] As demonstrated below, the public interest would be served by pairing these two bands so they can be used to support efficient communications. Indeed, these are one of the few bands of reallocated spectrum that are readily capable of being paired, and the public interest would be disserved if the little spectrum that can be paired is not paired.

[1] *See* Notice at 8 ¶ 17.

None of the spectrum the NTIA has reallocated was specified for pairing. This is unfortunate, the Commission itself noting to the NTIA that it "would be helpful if [some reallocated] bands could be . . . paired to provide full duplex service," thereby increasing the uses to which the reallocated spectrum could be put.[2] In fact, the Commission has acknowledged that the 2300-2310 and 2390-2400 MHz bands "are two of the few [reallocated] bands . . . that readily lend themselves to paired operations."[3]

The record in this proceeding already demonstrates that the pairing of these two bands would support a wide variety of useful services to the public applications that could not be meaningfully supported without pairing.[4] For example, U S WEST has recently requested authority to use these very two bands in evaluating new digital technology to support fixed, two-way wireless loops in three very different settings:

- To serve a remote area outside Taos, New Mexico where the population density is less than two people per square mile and where mountains and canyons must be crossed to provide basic telephone service to rural residents;

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[2] *See* FCC Report to Ronald H. Brown, Secretary, U.S. Department of Commerce, Regarding the Preliminary Spectrum Reallocation Report, at 23 ¶ 54 (Aug. 9, 1994).

[3] Id. at 32 ¶ 74.

[4] *See, e.g.,* Southwestern Bell Comments, ET Docket 94-32 (June 15, 1994); Pacific Bell Comments, ET Docket 94-32 (June 15, 1994).

- To serve an area outside Billings, Montana (where population densities range from three to 50 people per square mile) to replace cable that has deteriorated and, as a result, impacted the reliability of existing telephone service; and

- To serve a fast-growing suburban area outside Fort Collins, Colorado, where exceptional growth has created demands which cannot be met with the capacity of the existing cable plant.[5]

Preliminary indications suggest that this digital loop technology, with access to the 2300-2310 and 2390-2400 MHz bands, will serve the public interest in many important and visible ways. It appears that this technology will provide a cost-effective way to serve many rural and remote areas, including people now without basic telephone service (because the cost to install wireline facilities is so prohibitive). It likewise appears that this technology will provide an easier, more cost-effective, and less disruptive way to serve areas where aging cable plant is beginning to deteriorate and impact the reliability of current telephone service.[6] And the use of wireless loops ap-

[5] *See* U S WEST Communications Application for Experimental Radio Station Authorization (Nov. 22, 1994).

[6] By use of wireless loop technology, telephone companies would no longer be required to dig through established yards and streets to replace new facilities.

pears to provide the only way to serve, in a timely fashion, areas experiencing exceptional growth.[7]

The technology U S WEST hopes to test also makes an efficient use of the spectrum. In suburban areas, U S WEST will be able to use low antenna heights and low power transmitters, thereby facilitating frequency reuse and, in the process, maximizing spectral use efficiency. In rural areas, U S WEST will mount the radio ports higher to provider longer ranges, thus permitting a single radio port to efficiently (and economically) serve multiple customers. Moreover, the technology being evaluated will facilitate use of bandwidth on demand.

That the 2300-2310 MHz band does not become available for use for one year does not present any meaningful problem with pairing this band with the 2390-2400 MHz band. While the 2390-2400 MHz band is available for use now, realistically, it will not be put to actual use until January 1996 — the very time that the 2300-2310 MHz band becomes available for use.[8]

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[7] Basic Exchange Telecommunications Radio Service ("BETRS") can also be used in certain rural areas to provide fixed wireless loops. However, BETRS is not used extensively because the cost of the systems are high. In addition, the spectrum designated for BETRS is shared with other users (*e.g.*, paging companies), and, as a result, spectrum is rarely available for BETRS in more densely populated areas.

[8] Three events must occur before either band can be put to actual use: (1) the Commission must make its allocation decision (*e.g.*, decide how the spectrum is to used); (2) it must then assign the spectrum; and finally (3) the licensee must design, engineer and construct its system (as well as submit and obtain its radio license).

Finally, pairing the 2300-2310 MHz band with the 2390-2400 MHz band will ensure that the 2300-2310 MHz band will be put to use as soon as the Federal Government makes the band available for use. Not only would the public interest be served by making immediate use of newly-available reallocated spectrum, but taking such a step would enable the Commission to exceed Congress's expectations — by allocating, assigning and putting to use 60 MHz of reallocated spectrum rather than the 50 MHz Congress mandated for the immediate future.

II. The Commission Should Impose Minimal Restrictions on Use of the 2300-2310 and 2390-2400 MHz Bands So Market Forces Can Determine their Best Use

The "principal objective" of this proceeding, the Commission has correctly observed, "is to ensure that the [reallocated] spectrum is put to its best and most valued use and that the greatest benefit to the public is attained."[9] The Commission has further observed, again correctly, that the best "way to achieve this goal is to adopt a broad and general allocation:"

> Such an approach would allow for flexible use of these bands so that licensees would be able to offer a wide range of services employing varying technologies. * * * In this context, we believe such a flexible allocation that relies substantially on market forces may be appropriate.[10]

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[9] Notice at 4-5 ¶ 8.

[10] Id. at 5 ¶¶ 8 and 9.

U S WEST believes that the most productive use of the 2300-2310 and 2390-2400 MHz bands would be to support the provision of fixed wireless loop, as the public interest is unquestionably served when basic telephone service can be provided in a more cost effective manner — particularly in rural areas which generally require universal service subsidies to keep rates for local service affordable. However, other parties identify other potential uses of the spectrum, contending that their suggested use better serves the public interest (*e.g.*, provision of live entertainment services to air travelers).

Assume, for example, a licensee decides to use the paired 2300-2310 and 2390-2400 MHz bands to provide low-power mobile telecommunications in urban areas only. The public interest is not served by having this spectrum lay fallow in rural areas. Consequently, this licensee should be permitted, indeed encouraged, to lease this unused spectrum slice in rural areas to another, including for another purpose (*e.g.*, to support fixed wireless loop applications).

Alternatively, assume the licensee decides to use the spectrum to provide fixed wireless loops in extremely high growth areas or in areas where copper plant has deteriorated — isolated areas encompassing only a small portion of its geographic license area. Once gain, this same spectrum could be used for other purposes (*e.g.*, point-to-point microwave applications) in those areas where the licensee does not use the spectrum itself.

The public interest is disserved when there is a demand for available but unused spectrum but that spectrum cannot be used because of inflexible regulatory restrictions. As the Commission has elsewhere acknowledged, its "important objective is to open this spectrum for commercial development and to eliminate the current regulatory barriers and uncertainties that now prevent this spectrum from being used."[11] Licensees should be encouraged to find ways to maximize the use of the spectrum throughout all portions of their service area, and giving licensees the flexibility to lease unused spectrum to others will do much to ensure that valuable spectrum does not lay fallow.

In summary, U S WEST endorses the Commission's proposal to adopt a broad and general allocation for the reallocated spectrum, but it further recommends that the Commission take one more step by giving licensees the flexibility to lease unused spectrum to others which may have a need for the unused spectrum as a practical and effective means to help ensure that scarce spectrum is used as fully as possible.[12]

III. Miscellaneous Provisions and Conditions

[11] Use of Radio Frequencies Above 60 GHz for New Radio Applications, ET Docket No. 94-124, RM-8308, at 10 ¶ 22 (Nov. 8, 1994).

[12] U S WEST agrees that the Commission should honor the three, limited use restrictions on the 2300-2310 and 2390-2400 MHz bands proposed by the NTIA to protect the government's continued use of spectrum in adjacent bands (*e.g.*, not use the bands for airborne or space-to-earth communications and restrict the use of the bands in the vicinity of the Puerto Rico planetary research facility).

Concerning the 2300-2310 and 2390-2400 MHz Bands

This section discusses miscellaneous conditions and provisions that should be applied to the 2300-2310 and 2390-2400 MHz bands to help ensure that this spectrum is put to its most productive use.

A. Geographic License Area. A flexible use approach makes it difficult to predict how the 2300-2310 and the 2390-2400 MHz bands will actually be used. It is reasonable to assume, however, that that this spectrum will be put to different uses in different areas. To maximize the flexibility available to each licensee, U S WEST recommends that the Commission use smaller geographic license areas such as Rand McNally "Basic Trading Areas."

B. Channel Blocks. The Commission seeks comment on the appropriate size of channel blocks for the 2300-2310 and the 2390-2400 MHz bands, asking whether it "should divide the spectrum into channel blocks of one to two megahertz."[13] However, few, if any, of the proposed uses for these bands could be accommodated in channel blocks this small. For example, the technology which U S WEST hopes to begin evaluating shortly requires, at minimum, 3.5 MHz of spectrum in each direction. Consequently, U S WEST recommends that the Commission divide these bands into two 10 MHz blocks.

[13] Notice at 6 ¶ 9.

Establishing blocks that are too small could effectively deprive the market of determining the most productive use of the spectrum.

C. Technical Rules. U S WEST endorses the Commission's proposal to "allow technical flexibility" in the reallocated spectrum whereby licensees in each geographic area would be free "to choose the channelization, signal strength, modulation techniques and antenna characteristics they employ, . . . consistent with not causing interference to other users."[14] U S WEST likewise agrees that interference to operations in adjacent service areas should "be controlled through power limits at the service area boundaries," and that licensees should "also be free to negotiate and develop agreements for interference conditions at the boundaries between their service areas."[15] Because the 2300-2310 and the 2390-2400 MHz bands are relatively close to the spectrum allocated for personal communications services U S WEST, consistent with the regulatory parity directive of the 1993 Budget Act, recommends that the Commission adopt comparable power limits to control harmful interference at the borders of the geographic license area.

D. License Renewals. The regulatory parity directive of the 1993 Budget Act would appear to dictate that the Commission adopt renewal ex-

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[14] Notice at 6 ¶ 10. Licensees could similarly use this same flexibility in their dealings with any leasees.

[15] Ibid.

pectancy rules for the 2300-2310 and 2390-2400 MHz bands similar to those it adopted for PCS licenses.

IV. Conclusion

U S WEST Communications recommends that the Commission pair the 2300-2310 MHz band with the 2390-2400 MHz band and that it give licensees the flexibility to lease their spectrum to others to help ensure that the spectrum is used fully throughout the licensee's service area.

Respectfully submitted,

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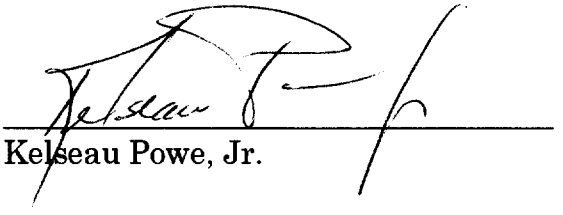
December 19, 1994

CERTIFICATE OF SERVICE

I, Kelseau Powe, Jr., do hereby certify that on this 19th day of December, 1994, I have caused a copy of the foregoing **COMMENTS** to be served via hand-delivery upon the persons listed on the attached service list.



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